Statement of Hammett & Edison, Inc., Consulting Engineers

The firm of Hammett & Edison, Inc., Consulting Engineers, has been retained by Granite Broadcasting, Corporation, licensee of multiple TV and DTV stations, to prepare this engineering exhibit in support of comments to the MB Docket 87-268 Seventh Further Notice of Proposed Rulemaking (Seventh FNPRM) regarding the final Table of Allotments for post-transition DTV operation.

Modification to the Seventh FNPRM TCD Parameters

Modifications to the Tentative Channel Designations (TCDs) for several Granite Broadcasting Corporation stations are needed, as follows:

WEEK-TV, N25/D57/TCD25, Peoria, IL

The TCD25 coordinates are 40-37-45 N, 89-32-52 W, NAD27, whereas the licensed WEEK-DT, D57, coordinates are 40-37-45.9 N, 89-32-52.6 W, NAD27 (FCC File Number BLCDT-20030523AFL). These licensed coordinates were derived from the tower registration, ASR1008775, geographic coordinates and we believe them to be more accurate than the TCD25 coordinates. The TCD25 power of 246 kW ERP is correct, but the antenna HAAT of 212 m should be refined to 211.6 m.

KSEE, N24/D16/D38/TCD38, Fresno, CA

The TCD38 coordinates are 37-04-18 N, 119-25-49 W, NAD27, whereas the coordinates should be 37-04-19.1 N, 119-25-48.8, NAD27, which are derived from ASR1219741, which is the tower that supports the KSEE-DT transmitting antenna. The TCD38 ERP is 528 kW at 601 meters HAAT; as will be shown, the correct ERP and HAAT should be 326 kW at 601.1 meters.

In its November 5, 2004, Form 381 Pre-Election Certification filing, KSEE-DT checked box 1a (maximized facilities), and gave file number BLCDT-20030523AEW. This file number was for the then-licensed, D16, maximized facilities of 326 kW ERP at 601.1 m HAAT, at the Meadow Lakes antenna farm site. However, KSEE-DT had to change its operating channel from D16 (482–488 MHz) to D38 (614–620 MHz), because of land mobile interference at both San Francisco and Los Angeles caused by the FCC-assigned D16. The rulemaking for this, MB Docket 04-236, changed the KSEE-DT allotment from D16 at 50.6 kW ERP to D38 at 326 kW, effective November 5, 2004 (*i.e.*, the rulemaking reflected the maximized facilities, and not the original D16 power of just 50.6 kW). The dipole factor at D16 is -2.1 dB and the dipole factor at D38 is 0 dB. Applying the +2.1 dB dipole factor difference from D16 to D38 to the already-maximized D38 ERP of 326 kW gives 528 kW, which is the TCD38 ERP. However, in this unusual case the application of the D16-to-D38 dipole

factor is inappropriate, since the replacement D38 allotment was already for maximized facilities. That is, KSEE-DT has already been changed from D16 to D38, as opposed to making this shift at the end of the transition period, so no additional dipole factor is needed.

The KSEE-DT D38 transmitting facilities at Meadow Lakes are a 24-kW Harris Sigma DTV transmitter, 3.0 meters of Andrew Type HJ-9 5-inch Heliax, 74.1 meters of Dielectric 4-inch DigitLine rigid transmission line, and a Dielectric Model TFU-10DSC-R C170 transmitting antenna. The power rating of the 4-inch transmission line at Channel 38 is 34 kW, and the antenna input power rating at Channel 38 is 23 kW. These are all adequate for the current ERP of 326 kW, which requires a transmitter power output (TPO) of 22.5 kW, a power of 22.4 kW at the transition from the 5-inch Heliax to the 4-inch rigid line, and an antenna input power of 20.1 kW. However, if the ERP were to be increased by 2.1 dB, to 528 kW, the required TPO would increase to 36.5 kW (beyond the capability of the existing transmitter), the input power to the 4-inch line would increase to 36.3 kW (beyond the line's rated power), and the input power to the transmitting antenna would increase to 32.6 kW (beyond the antenna's rated input power). Thus, increasing power from D38 at 326 kW to D38 at 528 kW would require a larger transmitter, new transmission line, and a new or modified transmitting antenna.

It should be noted that KSEE-DT has already had to bear the considerable expense of shifting frequency from D16 to D38 because the FCC-assigned D16 turned out to be too close to co-channel land mobile operations in the San Francisco Bay Area, and to co-channel public safety operations in the northern portion of Los Angeles County. Because of the public safety aspect of the interference, KSEE-DT elected to solve this allocations problem by its own initiative, even though it had already built and licensed its D16 transmitting facilities exactly as authorized, and even though it complied with the DTV-to-land mobile spacing requirement of Section 73.623 of the FCC Rules. When KSEE-DT filed its Petition for Rulemaking to move from D16 to D38, it intentionally did not further maximize the requested ERP by applying a dipole factor; that is, it was judged that 326 kW ERP on D38 was still a completely adequate power level for serving the Fresno market from the high elevation of the Meadow Lakes antenna farm site (and it is this high elevation which in part caused the 250 km DTV-to-land mobile spacing requirement to be insufficient to ensure that actual interference Is not caused to co-channel land mobile operations in San Francisco and northern Los Angeles County). Thus, given that the KSEE-DT Form 381 filing was made prior to the D16 land mobile interference problem, and prior to the rulemaking that changed KSEE-DT from D16 to D38, thus solving the Commission-created allocation conflict, it would be inappropriate to now require that KSEE-DT further increase its ERP to 528 kW. It is requested that the TCD ERP of 528 kW at 601 meters HAAT be changed to 326 kW at 601.1 meters HAAT.

WMYD, N20/D21/TCD21, Detroit, MI

The TCD21 coordinates are 42-26-52 N, 83-10-23 W, NAD27, whereas the coordinates should be 42-26-52.9 N, 83-10-23.3, NAD27, which are derived from ASR1003429, which is the tower that supports the WMYD-DT transmitting antenna.

WKBW-TV, N07/D38/TCD38, Buffalo, NY

The TCD38 coordinates are 42-38-14 N, 78-37-12 W, NAD27, whereas the coordinates should be 42-38-14.8 N, 78-37-11.9, NAD27, which are derived from ASR1001756, which is the tower that supports the WKBW-DT transmitting antenna. Also, the TCD ERP and HAAT are 358 kW at 433 meters, whereas they should be 358 kW at 432.9 meters.

KBJR-TV, N06/D19/TCD19, Superior, MI

The TCD19 coordinates are 46-47-21 N, 92-06-51 W, NAD27, whereas the coordinates should be 46-47-21.3 N, 92-06-50.7, NAD27, which are derived from ASR1024268, which is the tower that supports the KBJR-DT transmitting antenna. The TCD19 ERP is 433 kW at 315 meters HAAT; as will be shown, the correct ERP and HAAT should be 384 kW at 311.9 meters.

The November 5, 2004, KBJR-DT Form 381 filing selected Box 1e, "neither replicate nor maximize," and cited FCC File No. BDSTA-20021028ACC; this file number is for the KBJR-DT STA facilities of 433 kW ERP omni at 314.9 m AMSL, using a Dielectric Model TFU-20GTH-R O4 transmitting antenna. However, the C.O.R. height for the original STA application was incorrectly shown as 996.2 m AMSL, when it was really 616.9 m AMSL; this error was corrected in a superseding STA, FCC File No. BMDSTA-20041112AFD (still 433 kW ERP omni at 314.9 m HAAT). There is now a pending application for the permanent D19 facilities, using an RFS RO-16 transmitting antenna, with an ERP of 384 kW omni at 311.9 m HAAT. The ERP for the now planned post-transition D19 facilities is within 0.5 dB of the Form 381 power, and the HAAT is 3.0 meters lower; per Section 73.622(f)(3)(i), lowering the HAAT from 314.9 m to 311.9 m represents only a 0.1 dB power adjustment. Thus, the planned post-transition D19 facilities will be within 0.6 dB of the Form 381 facilities. Since the operating power tolerance for a DTV station is -1.0 dB/+0.4 dB (*i.e.*, 80% to 110% of the authorized power), it is reasonable to adjust the KBJR-DT TCD19 from 433 kW at 314.9 m HAAT to 384 kW ERP at 311.9 m HAAT.

WISE-TV, N33/D19/TCD19, Fort Wayne, IN

The TCD19 coordinates are 41-05-39 N, 85-10-36 W, NAD27, whereas the coordinates should be 41-05-38.8 N, 85-10-36.1, NAD27, which are derived from ASR1036820, which is the tower that

supports the WISE-DT transmitting antenna. The TCD19 ERP is 350 kW at 224 meters HAAT; as will be shown, the correct ERP and HAAT should be 285 kW at 239.3 meters.

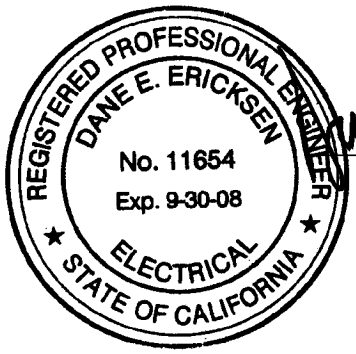
WISE-DT has been constructed and is on the air with facilities that do not match the permitted facilities. The WISE-DT CP is for 350 kW ERP omni at 468.2 m AMSL/224.3 m HAAT using a Dielectric TFU-22DSC O3 transmitting antenna, whereas the as-built transmitting antenna is an RFS Model RO24O with a C.O.R. height of 483.4 m AMSL/239.5 m HAAT; that is, 15.2 meters higher than authorized. Because this exceeds the +2/-4 meter window allowed in a license-to-cover Form 302 filing, an application for a modified application for CP was filed on January 23, 2007, to reflect the greater height.* Because of the August 3, 2004, Freeze Order, the D19 ERP has been reduced from 350 kW to 285 kW in order to not cause an extension of the permitted DTV threshold contour. To cover the current operation of the as-built WISE-DT facilities, on January 23 an application for Special Temporary Authority (STA) was also filed.† That STA application provided a detailed explanation of the events leading up to the construction of facilities that did not match the permitted facilities (which occurred before Granite Broadcasting Corporation acquired the station).

WTVH, N05/D47/TCD47, Syracuse, NY

The TCD47 coordinates are 42-57-18 N, 76-06-34 W, NAD27, whereas the coordinates should be 42-57-18.8 N, 76-06-34.3, NAD27, which are derived from ASR1003682, which is the tower that supports the WTVH-DT transmitting antenna.

Summary

For the reasons given in this engineering statement, the Final Channel Designations (FCDs) for the above-identified Granite Broadcasting Corporation DTV stations should be modified as indicated.



Dane E. Ericksen, P.E.

January 25, 2007

* FCC File Number BMPCDT-20070123AAR.

† FCC File Number BDSTA-20070123AAP.